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ANNUAL REPORT  
OF THE  
FIRE DEPARTMENT  
FOR THE PERIOD

JANUARY 1, 1989, TO DECEMBER 31, 1989

BOSTON, FEBRUARY 1, 1991

HON. RAYMOND L. FLYNN,  
*Mayor of Boston.*

DEAR MR. MAYOR:

I submit herewith the annual report of the Boston Fire Department for the period January 1, 1989 to December 31, 1989.

During this period, the department continued with the rebuilding program of replacing antiquated fire apparatus and equipment. Through this continual replacement, the average age of apparatus has been reduced to under five years.

Of over 45,000 alarms responded to in 1989, only fifty-six responses became multiple-alarm fires, attributable to adequate on-duty manpower and front line apparatus. This, combined with the constant upgrading of the auxiliary support divisions, has further increased the protection of the citizens of Boston.

Without the tremendous cooperation of you and your staff, these goals would be unattainable.

Respectfully submitted,

MARTIN E. PIERCE, JR.,  
*Fire Commissioner/Chief.*

## HEADQUARTERS STAFF

*Fire Commissioner*, LEO D. STAPLETON

*Chief of Operations, Deputy Chief*,  
JOHN D. WHITE

*District Chief, Assistant to the Commissioner*,  
JEREMIAH J. DONOVAN

*Executive Assistant to the Commissioner*,  
GERARD J. HORGAN

*Department Medical Examiner*, ALAN W. JENEST, M.D.

*Deputy Fire Chief in Charge Personnel Division*,  
JOHN A. LOCKHEAD

*Deputy Fire Chief in Charge Fire Prevention Division*,  
FIRE MARSHAL MARTIN FISHER

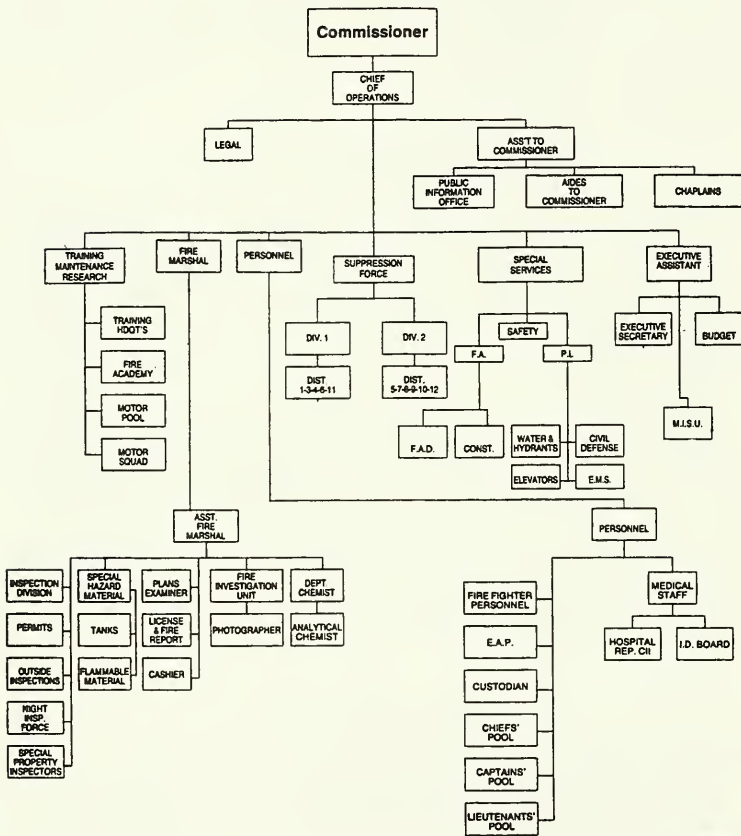
*Deputy Fire Chief in Charge Special Services Division*,  
*Director of Civil Defense*, NINO N. TRAMONTOZZI

*Deputy Fire Chief in Charge of Training, Maintenance  
and Research Division*, MARTIN E. PIERCE

*Superintendent of Fire Alarm Division*,  
ROBERT J. MCCARTHY

*Chaplains*, REV. MSGR. JAMES J. KEATING, Catholic  
RABBI IRA A. KORFF, Jewish  
REV. EARL W. JACKSON, JR., Protestant

# BOSTON FIRE DEPARTMENT Organization



## HEADQUARTERS DIVISION

- 1) Executive Assistant's Office
- 2) Public Information
- 3) Accounting
- 4) Budget/Fiscal Office
- 5) Executive Secretary's Office
- 6) Management Information Systems
- 7) Payroll

## EXECUTIVE ASSISTANT'S OFFICE

The Office of the Executive Assistant's first line of responsibility is to the Fire Commissioner/Chief of the Boston Fire Department. The office assists in the administration of the Department and makes recommendations for plans and policies. The Executive Assistant acts as the Commissioner's liaison with various divisions of the Fire Department, City of Boston Departments, and state and federal agencies.

Commissioner/Chief Leo D. Stapleton continued toward the completion of his goal of replacing the entire fleet of apparatus with the acquisition of four new Aerial 110' Ladder Trucks. They were placed in service in Dorchester (Ladder 7), Back Bay (Ladder 15), South Boston (Ladder 18), and East Boston (Ladder 21). This brought the total replacement of apparatus which began in 1984 to thirty-three (33) Engine Pumpers, seventeen (17) 110' Aerial Ladder Trucks, two (2) Rescue Companies, and one (1) 95' Aerial Tower Unit.

This year provided the opening of the Fort Hill Square Fire House, the largest fire fighting structure in the city. This building is the first privately constructed fire house in the country and also the first within an office development.

All hose was replaced with new lightweight more durable hose.

The on duty force hovered near three hundred (300) fire fighting personnel per shift through the year attaining one of the Commissioner's personnel goals.

The Office of the Executive Assistant is responsible for the operating budget and all capital bonding monies invested in the department. The operating budget for the fiscal year 1989 was \$79,588,078. Personal services encompassed the biggest part of the budget — \$73,516,905.

This office oversees the work of all civilian employees. Departments include Auditing, the Executive Secretary's Office, Management Information Systems, and Payroll. Personnel primarily work at Headquarters and assist Department members and the general public.

## BUDGET

	FY 1988 EXPENDITURE	FY 1989 EXPENDITURE
Total Personal Services	\$68,807,770	\$73,516,905
Total Contractual Services	2,568,467	2,578,899
Total Supplies and Materials	1,925,138	1,957,210
Total Current Charges and Obligations	989,515	867,514
Total Equipment	546,231	667,550
Grand Total	\$74,837,121	\$79,588,078

## PUBLIC INFORMATION

The Public Information Office serves as a connecting link between the Boston Fire Department and the people living and working in Boston.

Most surveys and requests for information are directed to this section. Research materials and information are gathered for documentaries, newspaper or magazine articles, radio, and television programs. The Office acts as a liaison to the Greater Boston Fire Safety Council, a group of Greater Boston business people whose efforts assist the Boston Fire Department in fire safety education. Arrangements are made to provide fire prevention and fire safety materials to interested parties.

Departmental swearings-in, promotional ceremonies and award presentations are coordinated. This section cooperates with the Department Chaplains, the Church Committee, and the Honor Guard in the preparation of dedications, memorials, funerals, and other spiritual functions.

## HEADQUARTERS

The Boston Fire Department Headquarters Division consists of five (5) sections under the direction of the Assistant to the Commissioner. These areas insure that the Department is operated in an efficient manner.

## ACCOUNTING

The Accounting Office is responsible for all fiscal expenditure forms and requests forwarded from the Boston Fire Department Budget Office. These include service orders, non orders, requisitions, purchase orders, change orders and contracts.

Records are kept of all transactions, expenditures and charges as they occur. Balances are posted daily. The section is in constant communication with City Hall Departments such as Auditing, Budget, Purchasing and Treasury and vendors to secure information concerning payments, purchases and deliveries, account coding, and other changes.

## **BUDGET/FISCAL OFFICE**

The Budget Office is responsible for overseeing fiscal reports generated by the Department, including projections, monthly progress reports, spending plans, and changes as well as information on the Mayor's priority goals.

Requisitions, service orders, non orders and contracts are reviewed and either approved or changes recommended. Quarterly meetings were held with program managers to review their expenditures and measurements.

Annual budget requests for the Boston Fire Department are sent to this Office. The budget is then reviewed by the top level managers of the Department. The Fire Commissioner, when satisfied with the fiscal year's budget, submits it to the Mayor for approval.

The budget contained forty-five (45) measurement criteria and goals. They include tracking the number and types of inspections done on a monthly basis by the Fire Prevention Division, reducing the number of incidents the Fire Department responds to, and reviewing the average response time to an incident.

## **EXECUTIVE SECRETARY'S OFFICE**

The Executive Secretary's Office maintains all personnel records, accounts and reports pertaining to the Department.

This section acts as the conduit for all matters relating to the personnel system including salary adjustments, the hiring of new employees, all fire fighter indemnifications, civil service matters relative to appointments, and promotions.

The staff interprets collective bargaining agreements that may result in step rate increases, vacation allowances, posting of vacancies, worker's compensation, bonuses, leaves of absence, and retirements.

Motor vehicle accidents, damages to department property, third-party payments, and charges to the Massachusetts Turnpike Authority for departmental services are coordinated with the City of Boston Law Department.

The personnel budget for each division of the department is prepared yearly.

## **MANAGEMENT INFORMATION SYSTEMS UNIT**

The Management Information Systems Unit (MISU) coordinates the electronic data processing operations of the Boston Fire Department. These operations include the development and maintenance of computer applications at Headquarters and Fire Alarm.



A Wang VS Minicomputer is used at Fire Alarm to assist in dispatching operations and the identification of special hazards and other information.

A Local Area Network was installed and is currently being used by the Fire Prevention Division to share their data.

Ten (10) microcomputers were placed in Headquarters to assist in office automation. These computers support word processing, data base management and spreadsheet applications.

### **PAYROLL**

The Payroll Division's responsibility is to ensure that Department personnel are paid accurately and on a timely basis.

Employees are assisted in making decisions on payroll deductions and medical and insurance options.

A separate holiday payroll was initiated which enabled the City to meet the thirty (30) day payment as required by the Local 718 contract. An acting out or grade and step rate file for each employee was created and is maintained on the Wang network at Headquarters.

On receipt of subpoenas and insurance claims, this division does the necessary research of employees' payroll records.

### **PERSONNEL DIVISION**

- 1) Administration
- 2) Medical Examiner's Office
- 3) Selection Unit
- 4) Personnel Assignment

### **PERSONNEL DIVISION**

The Personnel Division is divided into the following sections: Administration, Medical Examiner's Officer, Selection Unit, and Personnel Assignment.

### **ADMINISTRATION**

The Administration section is responsible for liaison with various departments including: the Department of Personnel Administration, Local 718, Law Department, and other departments and local unions throughout the country. This division investigates charges and grievances and follows them through at Labor Relations and Arbitration. A member of this office attends all Civil

Service disciplinary appeals, Selection Unit appeals, M.C.A.D. cases, and Court cases concerning the Boston Fire Department.

### **MEDICAL EXAMINER'S OFFICE**

The Medical Examiner's Office handled 4,087 personnel contacts which included office visits, physicals, hepatitis B and flu shots. The total number of Medical Indemnification forms processed was 1,348. This section is responsible for the security and maintenance of medical files for the Department. The Hospital Representative made numerous visits to hospitals to see members who have been admitted.

### **SELECTION UNIT**

This unit is responsible for scheduling numerous examinations and tests including: medical tests, strength/agility tests with the State, physicals, screening interviews, and fingerprinting. Public lotteries are held to place candidates on a list with tied marks. Each person's application is reviewed and an in-depth background investigation is conducted. The Department of Personnel Administration is contacted on all matters regarding hiring procedures. The Selection Unit acts as a liaison with medical facilities for drug testing purposes and also arranges drug tests for all Firefighters on Probation. Fire Departments across the country are contacted to compare hiring procedures.

### **PERSONNEL ASSIGNMENT**

This Office is responsible for the assignment of all Pool and Acting Officers. These vacancies occur due to vacations, injured leave, department business and other circumstances. All promotions within the Department are coordinated with the Commissioner's Office, Executive Secretary's Office, and the Department of Personnel Administration. The assignment of all vacations within the Department is coordinated with the Deputy Chiefs in Divisions 1 and 2. The unit orders, assigns and distributes all badges, hat devices, and lapel devices. Ninety-six (96) fire fighters were appointed in 1989 to the Boston Fire Department.



## 111TH ANNUAL BALL

The 111th Annual Ball and Awards Ceremony of the Boston Fire Department was held on May 25th, 1990 at the Park Plaza Hotel. Deputy Fire Chief John R. Harrison of Division 2 was the Master of Ceremonies.

The following members were honored for their meritorious acts during 1989.

## AMERICAN LEGION AWARD

Fire Fighter Robert M. Staunton	Engine Co. 21
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## DISTINGUISHED SERVICE AWARD

Fire Lieutenant Robert J. Crawford	Ladder Co. 15
Fire Fighter John J. Forristall	Engine Co. 33
Fire Fighter Martin J. Fernandes	Engine Co. 33
Fire Fighter James W. Rodgers	Ladder Co. 29
Fire Fighter (Inspector) Paul S. Hicks	Fire Prevention Division

## ROLL OF MERIT

Fire Lieutenant Timothy F. McGillicuddy, Jr.	Ladder Co. 7
Fire Fighter (Inspector) Phillip E. Marsh	Fire Prevention Division
Fire Fighter Gerard A. Yanovitch	Engine Co. 3
Fire Fighter John F. Kelly	Special Unit
Fire Fighter John J. Sullivan	Ladder Co. 7
Fire Fighter John L. McKay, Jr.	Ladder Co. 7
Fire Fighter Ralph P. Walker	Ladder Co. 29
Fire Fighter Donald E. Oliver	Ladder Co. 2

JOHN E. FITZGERALD MEDAL  
FOR THE MOST MERITORIOUS ACT  
BOSTON FIRE COMMISSIONER'S AWARD

Fire Fighter Robert M. Staunton	Engine Co. 21
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## AWARD OF RECOGNITION

District Fire Chief Kevin P. MacCurtain	District 5
District Fire Chief Edmund G. Maiorana	District 5
Fire Captain John J. McKenna	Engine Co. 4
Fire Lieutenant John F. Joyce	Rescue Co. 1

## **FIRE PREVENTION DIVISION**

- 1) General Inspections
- 2) License and Permit Section
- 3) Special Hazards
- 4) Fire Investigation Unit
- 5) Night Inspection Division
- 6) Plans Examiner
- 7) Fire Education
- 8) Fire Prevention Records
- 9) Microfiche
- 10) High Rise Sprinkler Retro Fit
- 11) Needleless Alarm Reduction Program
- 12) Chemist
- 13) Special Occupancies

## **FIRE PREVENTION**

The Fire Prevention Division consists of many sections. The following contains a brief overview of each area.

### **GENERAL INSPECTIONS**

The District Inspectors inspect smoke detectors for the sale of one- to five-family houses under Chapter 148 Section 26F. They resolve complaints in their districts, review permits and licenses, and issue abatements for violations.

The inspectors follow up on abatements that are sent in from the field. Non compliance cases and code violations are resolved through court action if necessary.

Other City departments are notified when a situation is observed that should be brought to their attention through Form 65s. The Fire Marshal meets with the Inspectional Services Department Commissioner regularly to resolve conflicts.

### **LICENSE AND PERMIT SECTION**

The License and Permit Section is responsible for conducting inspections of facilities, businesses, and construction sites where Fire Department permits are required. Permits are necessary for such activities as the storage and handling of flammable and combustible liquids, gasses, and solids; the construction or alteration of any structure; placement of dumpsters; the handling of asbestos; welding or cutting operations; the use, storage or handling of explosive materials; and the installation or subsequent impairment of fire protection or suppression systems.

As a direct result of aggressive permitting by this section, especially where construction and demolition take place, the fire incidence at construction sites has gone from common every day practice to nil. A construction site has not required more than one alarm since Rowe's Wharf in 1986.

A major part of making and keeping construction sites safe has been solving the winter heating problem of these sites. This solution has involved substitution of steam and/or diesel in place of both random and universal use of propane to heat buildings open to the weather. This has been accomplished through the permitting process, and again active and aggressive enforcement.

This section inspects licensed properties and serves as the Fire Commissioner's designee for the City as an appointed member of the Committee on Licenses.

This office is involved in the ongoing restructuring and expansion of the permit and license system and utilizes its expertise to develop codes and procedures to respond to complex fire-related problems and hazards. As part of this, the Boston Fire Department Fire Prevention Code was rewritten to reflect current thinking and practices.

### **SPECIAL HAZARDS**

527 CMR 9.00 mandated changes for underground storage facilities including requiring double walled tanks and piping, and the retrofitting of old tanks with containment manholes, overfill and cathodic protection. Quick lube centers fall under the same regulations.

A joint venture with Boston Gas will see the first Compressed Natural Gas (CNG) facility opened in the spring of 1991. Sixty (60) Boston Gas vehicles will operate using this fuel. Plans are also in the works to operate some refuse vehicles with natural gas.

Self-service gas stations are now the responsibility of local Fire Departments. This involves the approval of plans through the final inspection before they are allowed to operate. A yearly inspection then follows.

New permits have been developed which will provide more information on hazardous materials. These hazardous materials range from flammable liquids, solids and gases to chemicals such as oxidizers, corrosives, poisons, anhydrous ammonia and chlorinated solvents. Plans are being made to track biohazard laboratories.

### **FIRE INVESTIGATION UNIT**

The Fire Investigation Unit responds to fires, other Boston Fire Department incidents, citizen's complaints, delivers charges, and follows up on investigations. Members respond to calls of Fire Personnel being harassed at an incident.

The F.I.U. now has the ability to do searches of paper trails on different properties. This has allowed them to get a better handle on arson-for-profit, which may have a tendency to increase as the economy and real estate values are depressed. Presently the F.I.U. is tracking certain high risk properties in the hope of preventing arson from occurring.

The Major Case Unit continues to be a very effective tool in investigation follow-ups. This has led to the apprehension of people responsible for arson, attempts to burn, and fraud.

Individual members of the Unit are active in the Massachusetts Chapter of Arson Investigators (IAAI) and the Massachusetts Association of Auto Theft and Arson Investigators (MAATAI). Both organizations consist of members from law enforcement agencies (state and local), fire services, insurance companies, private investigators, and the State Fire Marshal's Office. The goal of these groups is to reduce arson fires through in-depth investigations and the prosecution of guilty parties.

The photographers of the Fire Investigation Unit respond to fires, accidents, and other emergency calls taking color and black and white photos and videos when necessary. The majority of the developing and printing was handled by the Photo Unit. Video tape copying is processed for the Training Division.

Community involvement is part of the Unit's activities. Members attend community meetings coordinated by Fire Prevention's Fire Education Office.

Vehicle fires continue to decline due in part to the work of the Boston Fire Department's Auto Arson Investigation Unit (AAIU). They have decreased thirty-one (31) percent from 1988 and fifty-five (55) percent from 1986. This is a tremendous savings to the City in that wear and tear on fire fighters and apparatus has been significantly reduced. The foundation of this program is the legislation that went into effect in August 1987 requiring vehicle owners to report to their local Fire Department and complete a required amount of paperwork before they could collect on their insurance. This legislation was conceived and written by the Boston Fire Department. The aggressive enforcement of this law by the AAIU has led directly to the marked reduction in auto fires in the City of Boston.

As of this writing, it appears there is an upward trend in arson. Structure fires are down nine (9) percent while arson is up two and one half (2.5) percent. Economic trends are being watched closely to see if arson rates are affected.

The Fire Investigation Unit works very closely with two (2) Boston Police Detectives, a State Police Trooper from the State Fire Marshal's Office, and the Bureau of Alcohol, Tobacco and Firearms.

In 1989 the unit investigated eighteen (18) civilian fire deaths and all reported burn cases.

## NIGHT INSPECTION DIVISION

The Night Inspection Division inspects approximately 1,600 facilities with a capacity of fifty (50) or more people. All places of assembly are inspected quarterly. The busier night clubs are inspected weekend nights for overcrowding. Special events in places of assembly are checked for overcrowding and other violations. These events include concerts, live theater, the Boston Garden, Fenway Park, the Hynes Auditorium, and college arenas. Beginning in 1991, homeless shelters, lodging houses and group homes will be inspected leading to a projected 1,200 additional inspections.

## PLANS EXAMINER

The Boston Fire Department Plans Examiner provides a comprehensive review of building plans to insure compliance with State and City codes. These codes include the Massachusetts State Building Code, the Massachusetts Fire Prevention Regulations, Chapter 148 of the Massachusetts General Laws — better known as the Fire Prevention Laws, Fire Prevention Order 87-2 (Boston Fire Alarm Regulations) and the Boston Fire Department's Fire Prevention Code.

Items reviewed include locations and requirements for fire hydrants, Fire Department vehicular access, automatic sprinkler systems, fire alarm systems, and hazardous material storage. Proper installation of these items provides safer buildings for occupants and fire fighters.

Meetings are held with building owners to discuss fire prevention strategies. Technical assistance is given to other City and State agencies. Involvement prior to building construction insures building designs are consistent with the Boston Fire Department's goal of protecting life and property.

The City of Boston is fortunate to have Mr. Paul Donga, a Fire Protection Engineer in training on its staff, affording the Boston Fire Department a uniquely professional approach to fire safety, benefitting the public's safety as well as fire fighter safety.

## FIRE EDUCATION

The Office of Fire Education is responsible for promoting public awareness of fire safety and prevention.

Fairs, community meetings, senior groups, health care facilities, schools, group centers, summer camps, tours, organizations, businesses, and day care centers are used to promote fire education. Fire Department personnel share an understanding of the principles involved with fire safety.



Fire education covers topics such as smoke detectors, fire extinguishers, escape planning, smoking, and cooking safety. Individuals are encouraged to pass this information onto their family, friends, and neighbors.

### **FIRE PREVENTION RECORDS**

This section interacts with the public during business hours. They assist fire victims, citizens applying for permits and licenses, and provide research on inquiries.

Company commanders are notified by this section when inspections for certain occupancies are needed. Basic information on each occupancy and their inspection dates are recorded.

The records section is responsible for the collection or disbursement of Fire Prevention Division fees. Fees for permits, licenses, smoke detector inspections, fire reports, and other miscellaneous items are collected daily. In 1989, \$1,372,597 was collected.

### **MICROFICHE SECTION**

Fire Department records are stored on microfiche for future needs. Fire reports, fire alarm dispatch slips, arson reports, chief's reports, emergency medical reports, morning reports, abatements, permits, licenses, underground storage tanks, complaints, and interagency forms are among the documents that have been transferred to microfiche.

The use of microfiche has made it easier to access old records and make copies of them. This system provides a legally acceptable document for court cases and the public.

### **HIGH RISE SPRINKLER RETROFIT LAW**

A serious fire at the Prudential in January 1986 led to a High Rise Sprinkler Law which was passed and signed into law in the Fall of 1987. It is officially known as Massachusetts General Law — Chapter 148 — Section 26A ½.

The wording of the law was questioned and a legal opinion was sought on the condominium issue. Attorney General James Shannon ruled favorably on this issue in the Spring of 1988.

The owners of high rise buildings received literature about the law and were required to make decisions regarding the sprinklering of their building. The compliance enforcement had met with great success. All "classic" high rise buildings (15 or more stories) are either fully sprinklered and alarmed or actively engaged in the process.

All work is to be completed by 1998. The threat of a "towering inferno" will then be effectively eliminated in the City of Boston.



## **NEEDLESS ALARM REDUCTION PROGRAM**

The Needless Alarm Reduction Program (NARP) started on September 1, 1987 with the institution of Fire Prevention Order 87-2. Its intent was to reduce the number of responses of Boston Fire Department personnel and apparatus to needless alarms. Alarm system malfunctions caused by sprinklers, smoke detectors, and heat detectors at properties with central stations and master boxes are addressed by this program.

An ordinance requiring mandatory fines for needless fire alarm responses was passed unanimously by the Boston City Council in 1988. This legislation became an integral part of the Needless Alarm Reduction Program and became effective January 1, 1989.

Numerous locations have made significant improvements to their safety systems, relocated smoke detectors, and decreased their sensitivity. Engineers, facility managers, and fire safety officials have all helped make an impact on needless alarm reductions.

The fine process has made it financially prudent for many property owners to address their problem rather than continue to pay fees to the City.

Separate coding for local alarms was instituted late in 1990. Whereas Fire Prevention Order 87-2, and City of Boston Ordinance Title II, Chapter 4 (Fire Alarm Fires) address system needless alarms, local alarms (under 25 units) had not been addressed. Information will be gathered in 1991 on local alarm problems, and enforceable solutions will be sought to this problem while working toward continued reductions in overall needless alarms.

## **CHEMIST**

The duties and responsibilities of the Chemist include the development and implementation of regulations based on the Fire Prevention Code, Article IX, Decorations, Furnishings and Interior Finish, and Article XX, Hazardous Materials and the establishment of an analytical laboratory to support fire investigation. The Chemist participates in ongoing programs in the Fire Prevention Division, the Training, Maintenance and Research Division and the Special Services Division.

## **FIRE PREVENTION LABORATORY**

The establishment of the Fire Prevention Laboratory was accomplished in accordance with the order of the Fire Commissioner following the mandate of the Mayor in February 1984. The Laboratory is operated under the direction of a full time professional forensic chemist. Laboratory reports and the testimony of

the Senior Analytical Chemist are accepted in criminal cases prosecuted in Suffolk County. The Senior Analytical Chemist has responded to major fires to assist the Fire Investigation Unit in its selection of material for analysis. This Laboratory has enhanced the capability of the Fire Department to successfully investigate and prosecute arson cases.

### **CONTROL OF DECORATIONS, FURNISHINGS, AND INTERIOR FINISH**

The Chemist has continued the development and implementation of controls on combustible building contents under the authority of Article IX of the Fire Prevention Code.

The regulations for upholstered furniture have received national recognition and have played a major role in the development of standardized full scale test procedures. These new tests are the focus of a national effort to control furniture in hotels, hospitals, entertainment facilities and other regulated occupancies.

A potential fire hazard in hospital bedding was uncovered and investigated. Hospitals were contemplating the use of foam pads of substantial size on top of mattresses to reduce the incidence of bed sores. Tests were performed with pads and hospital mattresses and the potential fire hazard of the pads was confirmed. It was further determined that some of the mattresses routinely used by hospitals constituted a fire hazard. The existing regulation for mattresses for hotels and dormitories will be extended to hospitals. The foam pads used in hospitals will be regulated.

In addition to classification of materials by performance of fire test, considerable effort was expended to inform and communicate with architects, designers, purchasing agents and sales organizations the importance of the Fire Department regulations and procedures for compliance.

### **HAZARDOUS MATERIALS**

Fire Prevention concerns include the Laboratory Safety Program, the regulations controlling the transportation of hazardous materials, and the permit/license controls for the storage and use of hazardous materials.

Training, Research, and Maintenance activities include the responsibility for the specifications used to procure protective clothing and equipment and field evaluations of newly developed protective clothing. The Chemist takes part in the special training exercises conducted for fire companies and chief officers who respond to major hazardous materials incidents. He serves on committees designated to prepare Standard Operating Procedures for hazardous material incidents.

Participation with Special Services involves the Title III, Superfund Amendments and Reauthorization Act and serving as the Right-To-Know person on the Local Emergency Planning Committee. The Chemist is currently designated as the Acting Municipal Coordinator for the Massachusetts Right-To-Know law.

The Department has a technical specialist on-call for response to hazardous material incidents. Five (5) members of the fire fighting force have the technical expertise and training to handle these emergencies.

### **SPECIAL OCCUPANCIES**

Company officers in the field complete quarterly inspections of hospitals and schools. The Inspectors assist the field due to the complexity of the occupancies involved. Abatements are reviewed to insure that a location has complied with the Fire Department's findings. Consultation and suggestions are made concerning new construction or modifications to existing structures. Fire education for a specific occupancy is provided to assist the management in preventing fires.

There are a number of different occupancies that, due to their size and potential life safety hazard, require special knowledge and are assigned full time inspectors by the Boston Fire Department. These include hospitals, hotels, schools, nursing homes, day care centers, and laboratories. Legally mandated, routine inspections are made to insure code compliance, as well as responses to fire incidents in support of the field forces on an as called basis.

### **TRAINING MAINTENANCE & RESEARCH DIVISION**

- 1) Department Training Program
- 2) Field Evaluation of Safety Equipment
- 3) New Equipment
- 4) Research and Evaluation
- 5) Servicing and Repair Programs
- 6) Driver Safety and Training Program
- 7) Harzardous Material Training Program
- 8) Apparatus
- 9) Facilities

### **TRAINING, MAINTENANCE & RESEARCH DIVISION**

The primary functions of the Training, Maintenance, and Research Division are:

- 1) To initiate and supervise the job development of the fire fighter, commencing with the probationary period and continuing throughout their career.

2) To become involved in research programs designed to improve fire fighting techniques, fire fighting apparatus and equipment, and protection of fire fighters; to prepare specifications for new fire apparatus; and to test and evaluate new tools and appliances before recommending their use in the Department.

### DEPARTMENT TRAINING PROGRAM

The recruit training for 1989 had three (3) separate drill classes. Ninety-eight (98) members successfully completed the training program.

The first drill class was held February 22, 1989 with 54 members from Boston and 1 member from Dedham attending and graduating on April 28, 1989.

The second drill class was held on June 14, 1989 with 36 members from Boston, 5 members from the Newton Fire Department, and 1 member from the Needham Fire Department attending for a total of 42. This class ended on August 18, 1989.

A third drill class was held on November 29, 1989 with 6 members attending and was completed on January 12, 1990.

A total of nine and one-half (9½) weeks of intensive training was held at the John A. Martin Fire Academy, Moon Island. Those members who satisfactorily finished drill school are now in their assigned companies.

Fire College for all company officers and acting officers was held at Memorial Hall, Headquarters, from January 4 through January 27. Subject matters included Structural Hazards, Flammable Liquids, Hazardous Materials, the Personnel Division, the Fire Prevention Division, and the Fire Investigation Unit.

There is a constant program of instruction and drills held at both the company level and at the Academy.

A seminar for all Deputy Fire Chiefs, District Fire Chiefs, and the Tower Company was conducted from April 4 through April 7. Topics discussed were the Collapse of Burning Buildings and Fire Fighter Safety and Survival.

A Portable Maze was put into operation in late October, 1989, to ensure that all members were able to fulfill their drill requirements on the Scott 4.5 SCBA. This drill was a basic review of S.O.P. 32, 32A, 32B which covers care, maintenance and operation of the 4.5 air mask.

A vehicle extrication course provided training in the overall aspects of the use of power tools, hand tools, and patient care. A thirty (30) minute video was shown to all members prior to the actual on hands drill.

All engine companies were trained on proper foam operations, the hydrant assist valve and drafting operations, portable deck gun

and basic engine company evolutions. All ladder companies and the Tower Unit were trained in the proper operation of ladder pipes and the proper techniques of raising and lowering the different size ground ladders and aerial.

Familiarization with High Pressure hydrants in Division One was held for all engine companies of both Divisions One and Two.

A Special Hazards Response Drill was held on the Use of the "Draeger Analyzer" and Advanced Breathing Techniques and Air Line Breathing Procedures.

A program at the Fire Academy reviewed tactics in handling LP/LNG trucking incidents, vapor cloud control, liquid and vapor pressure fires, liquid spill fires and dry chemical extinguishers and High Expansion Foam.

A CPR First Responder course was conducted for all members.

L.R.V. Training for selected companies was held at the Cleveland Circle MBTA Yard.

## FIELD EVALUATION OF SAFETY EQUIPMENT

### *Fire Coats*

The division conducted field testing of Morning Pride Fire Coat and Night Hitch as a complete package. Another test was Morning-Pride Fire Coat and Night Hitch Anti-Stress protective clothing as a complete package.

### *Boots*

A new style boot (Lite-Styling) from Morning Pride (40 ounce weight per pair) was evaluated.

### *Suspenders*

Dyna-Back suspenders from Morning Pride for wear with night hitch were tested.

### *Gloves*

Gloves from Morning Pride — a Fire Guardian, Kevlar and Leather combination were examined. Leather gloves from Knoxville Glove Co. containing an all leather outer shell with a Gore-Tex liner were tested.

## NEW EQUIPMENT

Ladder Companies 7, 15, 18, 21 received new Emergency One Aerial Ladders. Their members were trained on operation and driving techniques.

New cable and lamps and accessories were obtained for the Special Unit (H-2). Extrication tools and equipment were continually updated. Five (5) complete Amkus extrication tools were issued to Ladder Companies 7, 10, and 18 and Rescues 1 and 2. Ladder Companies 21 and 29 had their Hurst power units converted to a 4 Cycle Power Unit. Guardian tools were issued to various companies.



## RESEARCH AND EVALUATION

Field testing of various type donner switches on Scott regulators was accomplished. Anti fog devices for Scott face pieces were tested. Kohler lights, ladder beacons, and various nozzles were evaluated.

## SERVICING AND REPAIR PROGRAMS

A service and repair program is conducted by this division on all fire fighting equipment, tools, and appliances at our repair facilities at Headquarters and the Fire Academy.

All ladder companies and the Tower Unit were steam cleaned, weight tested, lubricated and checked for any defects at the Fire Academy by the Maintenance Division. Hydrostatic testing of all air cylinders is an ongoing process and every air cylinder is hydrostatically tested every three years.

## DRIVER SAFETY AND TRAINING PROGRAM

Driver training was scheduled by the District Fire Chiefs for companies in their districts during weekend day tours. Training is given to any fire company upon the recommendation of a Deputy Chief following an accident hearing. All new recruits received driver training at the Fire Academy beginning with the class of March, 1989.

## HAZARDOUS MATERIAL TRAINING PROGRAM

There are mandatory training requirements for fire personnel concerning Title III which began in November, 1988. The fire fighting divisions are involved in a 24-hour program and the special response team has a 40-hour program. Training guides have been issued to each company and video tapes to each district as part of the curriculum.

## SAFETY EQUIPMENT ISSUED

Fire Coats	182
Fire Boots	325
Helmets	126
Work Gloves	1,785
Short Sleeve Fire Resistive	1,695
Station Uniform Shirts	
Fire Resistive Work Trousers	1,708
Fire Fighter's Sweatshirts	1,698



**DRESS CLOTHING ISSUED**

Deputy Chief Sack Coats	5
Officer's Sack Coats	50
Fire Fighter's Sack Coats	125
Dress Trousers	250
White SS Dress Shirts	425
White LS Dress Shirts	240
Light Blue SS Dress Shirts	320
Light Blue LS Dress Shirts	60
Navy Blue Dress Shirts	225
Dress Caps	205

**BOSTON FIRE DEPARTMENT  
APPARATUS IN SERVICE  
BY FIRE DISTRICT**

**DECEMBER 31, 1989**

**Division 1****District 1**

E	5	1984	Em-One/Ford
E	9	1987	Em-One/Cyclone
E	56	1985	Em-One/Ford
L	2	1984	Em-One
L	21	1989	Em-One

**District 3**

E	4	1987	Em-One/Cyclone
E	8	1987	Em-One/Cyclone
E	10	1985	Em-One/Ford
E	32	1985	Em-One/Ford
E	50	1984	Em-One/Ford
L	1	1988	Em-One
L	9	1976	Seagrave RB 1988
L	24	1988	Em-One
R	1	1986	Em-One/Ford Van
T	C	1985	Em-One
M	U	1971	(2 Boats)

**District 4**

E	3	1984	Em-One/Ford
E	7	1988	Em-One Cyclone 4 Door Cab
E	22	1985	Em-One/Ford
E	33	1985	Em-One/Ford
L	15	1989	Em-One
L	17	1984	Em-One
H	2	1980	GMC/1970 Intl RB 1987

## District 6

E	2	1985	Em-One/Ford
E	39	1984	One/Ford
L	18	1989	Em-One
L	19	1985	Em-One

## District 11

E	29	1984	Sutphen
E	41	1985	Em-One/Ford
E	51	1985	Em-One/Ford
L	11	1988	Em-One
L	14	1984	Em-One

## Division 2

## District 5

E	14	1985	Em-One/Ford
E	37	1987	Em-One/Cyclone
L	4	1986	Em-One
L	26	1986	Em-One

## District 7

E	17	1986	Em-One/Ford
E	21	1985	Em-One/Ford
E	24	1986	Em-One/Ford
L	7	1989	Em-One
L	23	1988	Em-One

## District 8

E	16	1986	Em-One/Ford
E	18	1987	Em-One/Cyclone
E	20	1984	Sutphen
FBR		1979	Sutphen/Ford
L	6	1984	Em-One

## District 9

E	28	1984	Em-One/Ford
E	42	1985	Em-One/Ford
L	10	1976	Seagrave RB 1987
R	2	1987	Em-One/Ford Van

## District 10

E	30	1985	Em-One/Ford
E	49	1985	Em-One/Ford
E	55	1984	Sutphen
BU	2	1981	GMC/Brush Truck
L	25	1976	Seagrave RB 1988

## District 12

E	48	1984	Em-One/Ford
BU	1	1981	GMC/Brush Truck
E	52	1987	Em-One/Cyclone
E	53	1987	Em-One/Cyclone
L	16	1984	Em-One
L	28	1976	Seagrave RB 1987
L	29	1986	Em-One

Air Supply Unit	1979	Sutphen/Em-One Body Rebuilt 1985
Communications Unit	1984	Ford/Wheeled Coach Body

**BOSTON FIRE DEPARTMENT  
APPARATUS IN SERVICE  
DECEMBER 31, 1989**

All units are diesel powered.

## ENGINE COMPANIES

2	1985	Em-One Ford	1250 GPM	
3	1984	Em-One Ford	1250 GPM	
4	1987	Em-One Cyclone	1250 GPM	750 Gal Tank
5	1984	Em-One Ford	1250 GPM	
7	1988	Em-One Cyclone 4-Door Cab	1250 GPM	750 Gal Tank
8	1987	Em-One Cyclone	1250 GPM	750 Gal Tank
9	1987	Em-One Cyclone	1250 GPM	750 Gal Tank
10	1985	Em-One Ford	1250 GPM	
14	1985	Em-One Ford	1250 GPM	
16	1986	Em-One Ford	1250 GPM	
17	1986	Em-One Ford	1250 GPM	
18	1987	Em-One Cyclone	1250 GPM	750 Gal Tank
20	1984	Sutphen	1500 GPM	With 67 ft. ladder
21	1985	Em-One Ford	1250 GPM	
22	1985	Em-One Ford	1250 GPM	
24	1986	Em-One Ford	1250 GPM	
28	1984	Em-One Ford	1250 GPM	
29	1984	Sutphen	1500 GPM	
30	1985	Em-One Ford	1250 GPM	
32	1985	Em-One Ford	1250 GPM	
33	1985	Em-One Ford	1250 GPM	
37	1987	Em-One Cyclone	1250 GPM	750 Gal Tank
39	1984	Em-One Ford	1250 GPM	
41	1985	Em-One Ford	1250 GPM	
42	1985	Em-One Ford	1250 GPM	
48	1984	Em-One Ford	1250 GPM	and
	1981	GMC	750 GPM	Brush Fire Unit 1
49	1985	Em-One Ford	1250 GPM	
50	1984	Em-One Ford	1250 GPM	
51	1985	Em-One Ford	1250 GPM	
52	1987	Em-One Cyclone	1250 GPM	750 Gal Tank

53	1987	Em-One Cyclone	1250 GPM	750 Gal Tank
FBR	1979	Sutphen Ford	1250 GPM	
55	1984	Sutphen	1500 GPM	and
	1981	GMC	750 GPM	Brush Fire Unit 2
56	1985	Em-One Ford	1250 GPM	

**BOSTON FIRE DEPARTMENT  
APPARATUS IN SERVICE  
DECEMBER 31, 1989**

All units are diesel powered.

TT = Tractor Trailer Type

RM = Rearmount Type

**LADDER COMPANIES**

1	1988	Em-One	110 ft RM
2	1984	Em-One	110 ft RM
4	1986	Em-One	110 ft RM
6	1984	Em-One	110 ft RM
7	1989	Em-One	110 ft RM
9	1976	Seagrave RB 1988	100 ft TT
10	1976	Seagrave RB 1987	100 ft TT
11	1988	Em-One	110 ft RM
14	1984	Em-One	110 ft RM
15	1989	Em-One	110 ft RM
16	1984	Em-One	110 ft RM
17	1984	Em-One	110 ft RM
18	1989	Em-One	110 ft RM
19	1985	Em-One	110 ft RM
21	1989	Em-One	110 ft RM
23	1988	Em-One	110 ft RM
24	1988	Em-One	110 ft RM
25	1976	Seagrave RB 1988	100 ft TT
26	1986	Em-One	110 ft RM
28	1976	Seagrave RB 1987	100 ft TT
29	1986	Em-One	110 ft RM

**RESCUE CO. 1**

1986 Ford/Em-One Aluminum Van Body with Cascade

**RESCUE CO. 2**

1987 Ford/Em-One Aluminum Van Body

**TOWER COMPANY**

1985 Em-One 95 ft RM Tower with 1500 GPM Pump

1979 Sutphen 1970 Maxim 1250 GPM/Squrt, rebuilt in 1986

**MARINE UNIT**

1971 Fire boats, 1-6000 GPM, 1-1500 GPM

## SPECIAL UNIT

1980 GMC/1970 International Lighting Plant, rebuilt in 1986

## HAZ-MAT UNIT

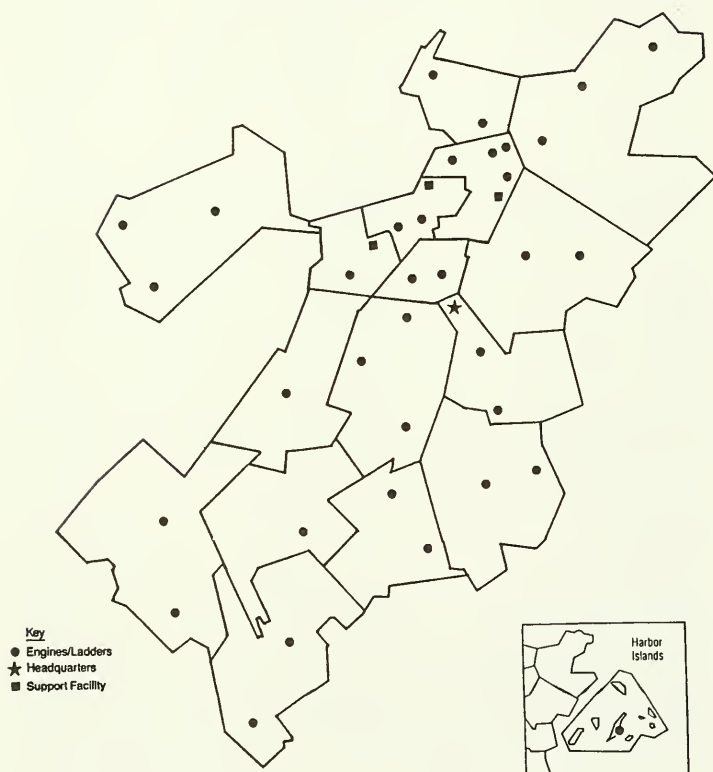
1979 Ford Sutphen Chassis/Aluminum Body — rebuilt in 1987

## AIR SUPPLY UNIT

1979 Sutphen/Em-One body rebuilt in 1985

## COMMUNICATIONS UNIT

1984 Ford/Wheeled Coach Body

BOSTON FIRE DEPARTMENT  
FACILITIES

# **BOSTON FIRE DEPARTMENT FIRE DEPARTMENT FACILITIES**

FACILITY	NEIGHBORHOOD	CONSTRUCTED
Eng 33/Lad 15	Back Bay	1888
Eng 18/Lad 6	Dorchester	1894
Eng 24/Lad 23	Roxbury	1898
Eng 30/Lad 25	West Roxbury	1898
Eng 5/Dist 1	East Boston	1902
Eng 51	Allston/Brighton	1913
Eng 49	Readville	1918
Eng 50	Charlestown	1918
Fire Alarm	Fenway/Kenmore	1925
Eng 21	Dorchester	1926
Eng 17/Lad 7/Dist 7	Dorchester	1928
Eng 29/Lad 11/Dist 11	Allston-Brighton	1929
Eng 2/Lad 19	South Boston	1932
Eng 37/Lad 26/Dist 5	Fenway/Kenmore	1933
Eng 3/Special Unit	South End	1941
Eng 54/Fire Brigade	Long Island	1946
Eng 8/Lad 1	North End	1948
Safety Unit	Beacon Hill	1949
Eng 56/Lad 21	East Boston	1950
Arson/Maintenance	Roxbury	1951
Headquarters	Roxbury	1951
Eng 42/Rescue 2/Dist 9	Roxbury	1952
Eng 16/Dist 8	Dorchester	1958
Eng 20	Dorchester	1958
Eng 53/Lad 16/Dist 12	Roslindale	1959
Eng 22	South End	1960
Training Academy	Moon Island, Quincy	1960
Eng 4/Lad 24/Dist 3	Downtown	1965
Eng 32/Lad 9	Charlestown	1970
Eng 7/Lad 17/Dist 4	Downtown	1971
Eng 48/Lad 28	Hyde Park	1972
Eng 52/Lad 29	Dorchester	1973
Eng 14/Lad 4	Roxbury	1974
Eng 55/Dist 10	West Roxbury	1974
Eng 9/Lad 2	East Boston	1977
Eng 39/Lad 18/Dist 6	South Boston	1977
Eng 41/Lad 14	Allston/Brighton	1977
High Pressure Station	Downtown	1979
Eng 28/Lad 10/Div 2	Jamaica Plain	1984
Eng 10/Div 1/Haz Mat/ Rescue 1/Tower Co	Downtown	1989
Marine Unit	Charlestown	1989



## **SPECIAL SERVICES DIVISION**

- 1) Planning and Logistics
- 2) Safety Operational Unit
- 3) Fire Alarm Section

## **SPECIAL SERVICES DIVISION**

The Special Services Division consists of three sections: Planning and Logistics, Safety Operational Unit, Fire Alarm Dispatch and Construction.

### **PLANNING AND LOGISTICS SECTION**

The Planning and Logistics Section is responsible for five (5) specific areas in the Department.

- 1) Liaison
- 2) Emergency Medical Services
- 3) Underwater Recovery
- 4) Local Emergency Planning
- 5) Office of Civil Defense

### **LIAISON**

This section serves as a liaison between the Boston Fire Department and public and private agencies that interact in matters of fire safety. Among these agencies are Police Departments, other Fire Departments, Public Works, Traffic, Public Facilities, Housing and Redevelopment, Health and Hospitals, Schools, Massachusetts Bay Transportation Authority (MBTA), Port Authority, Turnpike Authority, Massachusetts Water Resources Authority (MWRA), and Boston Water and Sewer Commission. These groups have important considerations that are vital to the general public living, working or visiting our city. The Department's coordination with these agencies is essential for public safety during an emergency.

This section works closely with the MBTA inspecting and testing subway station standpipe and alarm systems as well as other fire safety related matters.

Planning maintains a working relationship with the Boston Water and Sewer Commission (BWSC) to assist them in their work of maintaining the city's hydrant system. We are currently working under an agreement to coordinate a hydrant inspection program for the BWSC using the fire companies of the suppression force. Hydrant defects are reported to this office and then sent onto BWSC for repairs.

A major concern of the Department is the availability of adequate water for fire fighting purposes at easily accessible locations. The section works with the responsible agencies and departments

to improve the water resources at the Tobin Bridge, the MWRA Sludge Treatment Plant on Deer Island, the Sumner and Callahan Tunnels, and various construction sites in the city.

Members of this section attend pre-construction meetings with the Public Works Department and many contractors involved with construction projects to assist in coordinating the problems associated with street closings, accessibility to buildings under construction, bridge repairs, and other impediments to fire apparatus. This information is disseminated to the field by special orders and department radio. The Fire Alarm Office receives all temporary and permanent changes that might affect apparatus responses.

Private developers and contractors have their plans reviewed and automatic initiating and suppression fire systems in new and rehabilitated commercial developments are tested. The office meets with the Massachusetts Elevator Safety Board regarding elevator and escalator incidents encountered during Fire Department responses.

### EMERGENCY MEDICAL SERVICE

The Emergency Medical Service Office directs several ongoing programs. Training is provided at every fire company on current techniques used to perform CPR (Cardiopulmonary Resuscitation) and other life saving measures. The proper use of EMS equipment and materials is reviewed. All members are recertified in CPR on a yearly basis according to the requirements of the Massachusetts First Responder Law.

Eighty-five (85) recruits satisfactorily completed a twenty-six (26) hour First Responder course held at the John A. Martin Fire Academy.

A one hundred twenty hour (120) basic emergency medical technician's course was coordinated and held over a six (6) month period. A total of thirty-eight (38) new Emergency Medical Technicians have been added to Department rolls, bringing the present number to one hundred fifty-one (151) registered Fire Fighter/Emergency Medical technicians.

The instructors regularly attend seminars on infectious diseases in order to gain up to date information which is then passed on to the members in the field.

New resuscitators were purchased and placed in service on engine companies. This acquisition means that every engine, ladder and rescue company has a resuscitator which provides a faster response time to a person in need.

Various vaccines were administered to personnel who were exposed to contagious diseases. The office in conjunction with the Department Medical Examiner coordinated the Hepatitis B inoculation program.

## UNDERWATER RECOVERY

The Underwater Recovery Team consists of twelve (12) specialists in Self Contained Underwater Breathing Apparatus (S.C.U.B.A.). The members work assigned tours of duty at their fire companies and are on call for water incidents if the scene commander requests their expertise.

Bi-monthly drills are held to maintain high levels of proficiency for under ice dives, search patterns, water sled drills, signal drills, and techniques for entering the water from different locations on the waterfront.

The team keeps abreast of the latest diving techniques and procedures through seminars and publications. Three (3) members completed a five (5) day seminar for Public Safety SCUBA Instructors. They are currently training other members of the Department in the techniques divers use to search for victims in the water.

New equipment is constantly being developed to improve the safety and efficiency of the divers.

## LOCAL EMERGENCY RESPONSE PLANNING

A program has been developed by the Special Services Division to comply with the provisions of Title III of the Superfund Amendments and Reauthorization Act (SARA) for emergency response planning.

Any facility that uses, stores or produces any of 366 hazardous materials must contact the Local Emergency Planning Committee (LEPC) and the Boston Fire Department. Chemical reporting forms (Tier I and Tier II) and Material Safety Data Sheets (MSDS) are required. The reporting is further enhanced by submittal of Title III Facility forms. The Fire Department compiles information concerning the chemicals stored and their amounts, hazards and exact location, emergency response procedures for the facility, on site and off site emergency equipment to deal with a spill/release, transportation routes of hazardous materials, and contingency plans.

This data is used to conduct an on site inspection to confirm the information received, correct deficiencies, and to work with the facility coordinator to implement an emergency response plan. A meeting with the District Fire Chief in whose district the facility is located is conducted to disseminate the data and develop a pre-incident plan.

The pre-incident form contains data relating to the type of business, type of construction, common hazards, special hazards, sprinklers, standpipes, accesses and entrances, procedures to be used in the event of a spill/release, target hazards in the area, and a

completed site plan of the facility by the District Fire Chief. The Chief then submits his pre-incident plan for review.

Information is then passed on to Fire Alarm for dispatching purposes, Deputy Chiefs for review, District Chiefs and Safety Chiefs for training, and company officers for dissemination to members, thus decreasing the possibility of injury to members as they will be better prepared and informed. The completed pre-incident forms are available at an incident for use by the incident commander to mitigate the hazard in a more efficient and safe manner.

### **OFFICE OF CIVIL DEFENSE**

The Office of Civil Defense maintains contact with Federal and State Offices of Civil Defense, as well as the general public and business community. Radiological monitoring and testing is provided when needed within the city and is coordinated with the Police Department for the rotation and calibration of the 860 Radiological Monitoring Survey Meters.

Two new Radio Officers were appointed for the Civil Defense City Emergency Radio System. The Packet Radio System was tested and operational during the last drill.

Records and reports are submitted on a quarterly basis to the Federal and State Offices of Emergency Preparedness.

Participation in "disaster drills" involve various city departments and allows an opportunity to coordinate emergency planning.

### **SAFETY OPERATIONAL UNIT**

The Safety Unit, under the direction of a Deputy Fire Chief has one District Fire Chief assigned to each working group whose responsibility is to respond to all working fires and above, monitor the water supply and fire fighting evolutions at all incidents and the proper use of protective equipment and tools and appliances in an effort to reduce personal injuries and loss of time.

This section field tests safety equipment and investigates all accidents both personal and vehicle to determine if they were caused by defective equipment or procedures.

After any major incident, they review the procedures and recommend any changes that would make a safer environment for fire fighters to work in.

### **FIRE ALARM SECTION**

The Fire Alarm Section is responsible for the installation, maintenance and operation of the vast emergency communications network incorporated by the Boston Fire Department. This is accomplished through the activities of four (4) subsections: Operations, Radio Shop, Construction, and Inside Wiremen.



## FIRE ALARM OPERATIONS

The Operating Force of the Fire Alarm Section dispatched apparatus to 46,265 incidents during 1989, of these 41 were working fires and 56 required transmission of multiple alarms.

A major step in the modernization process for Fire Alarm Operations was achieved with the activation of a state of the art digital alarm decoder and transmitter system. These devices were installed in conjunction with four (4) completely redundant Motorola Centracom II six bay communication consoles.

This accomplishment was the culmination of over two years of extraordinary cooperation and coordination between members of this Department and representatives of many public and private agencies including the City of Boston Management Information Systems, New England Telephone Company, Nynex Corp., R. B. Allen Company Inc., Digitize Inc., and F. H. Chase, Inc.

The alarm decoding equipment referred to as the "DIGITIZER", has replaced all the marble, slate and brass components of the original Gamewell equipment which was installed in 1925 and has resulted in a tremendous space saving within the Operations area.

The new communication consoles allowed the consolidation of the six (6) major functions involved in the receipt of alarms and the dispatching of emergency units to be achieved from one position: telephone correspondence, computer generated unit dispatch information; preprogrammed and manual paging capabilities; radio operations; a remote DIGITIZER coded alarm receiver and transmitter; and an MBTA subway radio system.

A portable "FAX" machine was acquired for use in the Mobile Communications Unit. This enabled hard copy messages, incident forms, permits and other information to be transmitted directly to the scene in a timely and efficient manner.

The Wang Computer System at Fire Alarm was utilized to develop a program that allows more effective monitoring of the required testing and maintenance of fire alarm systems as specified in Fire Prevention Order 87-2. Implementation of this program enabled any deficiencies noted on quarterly test reports to be recorded by the Department and a notice forwarded to alarm service companies and property managers for rectification, thereby maintaining more fully effective fire alarm systems. Presently over 2,500 systems are being monitored.

Personnel of the Fire Alarm Section were actively involved with nationally recognized associations concerned with the many facets of public safety communications through serving on various committees, attending seminars and participating in sponsored workshops. These activities afforded members an opportunity to keep abreast of the many advancements in emergency communications technology such as COMPUTER AIDED DISPATCH (CAD) systems and Enhanced 9-1-1.

## FIRE ALARM CONSTRUCTION

A new heavy duty cable pulling truck with some of the latest essential options was acquired enabling extensive replacement of multi-conductor cable to be completed in the following areas of the city:

Brighton	48,000 feet
Downtown Boston	11,350 feet
East Boston	74,100 feet
Hyde Park	2,000 feet
Jamaica Plain	4,400 feet
Mattapan	155,400 feet
Roxbury	16,600 feet
South Boston	10,000 feet
West Roxbury	81,000 feet
Other areas	10,150 feet
Total footage of conductors:	403,000

The final phase of the Southwest Corridor Project (MBTA) was completed with the relocation of fire alarm box 2552 and associated cable at Washington and Morton Streets. The ongoing federally funded CANA Tunnel Project in the City Square section of Charlestown required the relocation and replacement of thousands of feet of multi-conductor cable and fire boxes at no cost to the City.

Fire Alarm Personnel attended numerous meetings for the Central Artery/Third Harbor Tunnel Projects which involved reviewing map layouts. Procedures were recommended for various Federal, State, City , and other agencies for new and reconstruction projects in reference to the relocation of fire alarm equipment.

An electric jack hammer was acquired which allowed the Construction force to complete projects which previously required outside contractors.

A new state of the art digital decoding unit providing a visual display and hard copy has been installed in Engine Co. 10's quarters for evaluation. This could replace the outmoded punch tape register currently utilized by the Department for the receipt of alarms.

Seventy (70) new master fire alarm boxes were installed for a total of 1,103 master boxes and 1,354 street boxes connected to the municipal system. The requirements of the NFPA standard were achieved through the testing of 5,785 fire boxes. Preventive maintenance, repairs and/or painting was performed on 2,975 boxes.



## RADIO SHOP

The Radio Shop is responsible for the installation, maintenance and testing of all wireless communication equipment and associated electronic hardware utilized by this Department.

Radio Shop personnel established a system for the fire house radio systems that would allow the channel one receiver to be muted automatically whenever a priority dispatch message is transmitted over channel five thereby eliminating the chance of error or a call for repetition of an urgent dispatch call.

This section was very instrumental in the successful planning and installation of the new Motorola dispatch consoles and DIGITIZER equipment.

A smaller and lighter waterproof portable radio was evaluated and put into service after modifications were made for effective waterproofing of the extension speaker/microphone. These new radios were issued to all command personnel, Deputy and District Fire Chiefs, and 32 Fire Companies. Acquisition of these radios enabled an additional portable radio to be issued to all Ladder Companies and the Rescue Companies. These radios were designated "Roof" radios and proved to be a very effective tactical tool while providing a critical safety factor.

### Activities

Issued new portable radios	35
Service to amplifiers and speakers	106
Repairs to paging units	4
Installed new pump panel speakers and microphones	4
Repairs to portable and mobile radios	492
Removed radio equipment	20
Installed new radio equipment in Department equipment	47
Issued replacement batteries for portable radios	30
Repaired electronic sirens	25
Issued new channel 5 receivers at fire houses	5

## INSIDE WIREMEN

The Inside Wiremen are responsible for the installation and maintenance of all electrical wiring and the associated apparatus and appliances including the internal Centrex telephone system of the Department.

The expanded use of computers within the Department required the installation of cable and peripheral equipment at Fire

Headquarters and the Fire Alarm Office. The installation of an Uninterruptable Power Supply (UPS) for the Wang VS 65 Computer gave assurance that the dispatch operations would continue if an electrical power outage should occur.

The temporary installation of the Portable Maze Unit at various locations required some ingenuity to obtain the needed electrical power. The Lighting Plant was completely overhauled and the steam cleaning unit at the Training Academy was rewired.

## **STATISTICS**

**TOTAL RUNS PER COMPANY**

ENGINE	TOTAL RUNS	LADDER	TOTAL RUNS	MISC.	TOTAL RUNS
2	867	1	1,026	CU1	245
3	1,483	2	1,519	HO1	643
4	1,607	4	3,328	HO2	648
5	1,401	6	2,420	HO3	131
7	2,262	7	2,314	MU	227
8	849	9	966	RO1	1,780
9	854	10	2,336	RO2	2,121
10	1,986	11	1,890	TC	2,181
14	2,255	14	2,494	W12	186
16	1,484	15	3,157		
17	1,507	16	1,914		
18	1,709	17	3,344		
20	708	18	1,923		
21	2,157	19	985		
22	1,744	21	915		
24	2,225	23	2,556		
28	1,735	24	1,808		
29	1,629	25	1,117		
30	860	26	3,619		
32	614	28	1,284		
33	2,718	29	2,256		
37	3,177				
39	1,366				
41	2,349				
42	2,085				
48	1,110				
49	363				
50	892				
51	760				
52	1,794				
53	1,686				
FB	87				
55	676				
56	735				

NOTE: This report tallies only responses to the scene of an incident. Covering is not recorded here.

**COMPARISON OF INCIDENT TYPES**

Type	Description	1988		1989		+ / -
		Total	% of Incs.	Total	% of Incs.	
100	Fires or Explosions	8,138	16.3	6,604	14.3	- 1,534
200	Overpressure					
	Ruptures	14	*	17	*	+ 3
300	Rescue/EMS Calls	7,936	15.9	6,170	13.3	- 1,766
400	Hazardous					
	Conditions	5,251	10.5	6,064	13.1	+ 813
500	Service Calls	7,758	15.5	6,593	14.3	- 1,165
600	Good Intent Calls	2,222	4.4	2,886	6.2	+ 664
700	False Alarms/Calls	18,606	37.2	17,884	38.7	- 722
800	Natural Disasters	4	*	10	*	+ 6
900	Other Situations	40	.1	37	.1	- 3
		49,969		46,265		- 3,704

\* No Significant %

**FIVE INCIDENT TYPES  
WITH THE MOST OCCURRENCES****1989**

RANK	TYPE	DESCRIPTION	TOTAL	% OF INCS.
1	710	False Alarm - Box	6,471	14.0
2	733	Smoke Detector Device Operated - No Fire	3,348	7.2
3	430	Food on the Stove	2,981	6.4
4	731	Alarm System Malfunction - Smoke Detector	2,743	5.9
5	592	Public Service	2,382	5.1

**1988**

1	710	False Alarm - Box	6,385	12.8
2	733	Smoke Detector Device Operated - No Fire	4,126	8.3
3	731	Alarm System Malfunction - Smoke Detector	3,511	7.0
4	321	Medical Assist	3,328	6.7
5	592	Public Service	3,291	6.6

**RANKING OF WORKING FIRES  
AND MULTIPLE ALARMS  
COMBINED BY DISTRICT**

**1989**

RANK	DISTRICT	WORK	MULT	TOTAL
1	11	6	11	17
2	7	8	7	15
3	3	5	7	12
4	5	1	8	9
	6	3	6	9
6	1	2	5	7
	4	4	3	7
	12	4	3	7
9	9	2	4	6
10	8	4	1	5
11	10	2	1	3
		<u>41</u>	<u>56</u>	<u>97</u>

**1988**

RANK	DISTRICT	WORK	MULT	TOTAL
1	5	9	10	19
	7	11	8	19
3	9	8	7	15
4	11	4	10	14
5	3	10	3	13
6	6	4	5	9
7	12	2	6	8
8	4	5	2	7
	8	3	4	7
10	1	2	3	5
11	10	2	2	4
		<u>60</u>	<u>60</u>	<u>120</u>



# COMPARISON OF ALARM LEVELS BY MONTH

## WORKING FIRES AND MULTIPLE ALARMS COMBINED

MONTH	1988		1989	
	TOTAL	YTD	TOTAL	YTD
January	17	17	12	12
February	11	28	8	20
March	5	33	14	34
April	10	43	7	41
May	8	51	9	50
June	16	67	2	52
July	5	72	6	58
August	4	76	3	61
September	8	84	4	65
October	5	89	7	72
November	12	101	9	81
December	19	120	16	97

# COMPARISON OF ALARM LEVELS

	1988	1989
Working Fires	60	41
Second Alarms	47	34
Third Alarms	6	9
Fourth Alarms	6	7
Fifth Alarms		2
Sixth Alarms		
Seventh Alarms	1	1
Eighth Alarms		1
Ninth Alarms		2
	<hr/> 120	<hr/> 97

**MUTUAL RESPONSES**

TOTAL RESPONSES TO	CITY/TOWN
120	City of Chelsea
78	City of Somerville
44	City of Newton
38	Town of Dedham
32	Town of Brookline
29	City of Cambridge
23	City of Quincy
20	Town of Milton
15	City of Revere
11	Town of Winthrop
8	City of Everett
2	City of Lynn
1	Town of Arlington
1	City of Waltham
1	Town of Watertown
1	Town of Weymouth